Name: HW149 3d shape side lengths

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Geometry, Period

Due Date: Wed, 6 May 2015

**Geometry**

**Classwork**

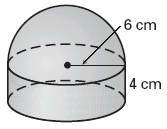


**Give all relevant formulas and show all work. You can assume that the center portions of the 3-D figures below (in grey) are removed from the shape. Failure to show all work will result in a LaSalle.**

1. The circumference of a lid of a can is 10π cm and the height is the same as the diameter. Diagram this and calculate its surface area.

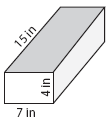
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1. What is side-length of the smallest square that the can could sit on with the edges touching? (In geometric terms, the circle of the can is *inscribed* in the square.)
2. What are the dimensions of the smallest box that could contain the can?
3. How much space would be left in the box outside the can?
4. Find ~~the surface area and~~ the volume of the solid. The cylinders and cones are right. Round your answer to two decimal places.

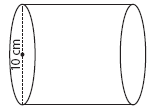


~~Surface Area: \_\_\_\_\_\_\_\_~~ Volume: \_\_\_\_\_\_\_\_\_\_

1. If the rectangular prism below has a volume of 420 in3, what is its base length?



1. Formula for volume of this shape:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the value of V that was given to us?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Use that value and formula to solve for base
4. If the right cylinder below has a volume of 275π cm3, what is its height?



1. Formula for volume of this shape:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the value of V that was given to us?\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Use that value and formula to solve for height
4. ~~A sphere has a surface area of 113.1 m~~~~2~~~~. What is its radius?~~

**Review Problems: Show work or explain your answer**

|  |  |
| --- | --- |
|  | There are three job openings for Level I computer technicians, and six applicants. How many different ways could these six applicants be chosen to fill the three job openings?   1. 6 2. 20 3. 120 4. 520 |
|  | The two triangles below are similar.    What is the area of the large one?  **A.** 30  **B.** 35  **C.** 37.5  **D.** 40 |